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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/699,565

10/30/2003

Henry Dombroski

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1578

21917

7590

08/03/2006

MCHALE & SLAVIN, P.A.

2855 PGA BLVD

PALM BEACH GARDENS, FL 33410

EXAMINER

BELLINGER, JASON R

ART UNIT

PAPER NUMBER

3617

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/699,565	Applicant(s) DOMBROSKI ET AL.	
	Examiner Jason R. Bellinger	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7 and 9-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Terminal Disclaimer

1. The terminal disclaimers filed on 17 February 2006 and 14 March 2006 disclaiming the terminal portion of any patent granted on this application, which would extend beyond the expiration date of application 10/376,756 has been reviewed and is accepted. The terminal disclaimers have been recorded.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Jensen. Robbins shows a pressurized wheel hub for a trailer

11. A wheel hub 21 includes bearings 22-23 rotatably secured on an axle 24. Seals (30 & 39) are located between the hub 21 and the axle 24 to form a closed air space around the bearings 22-23.

Robbins shows a pneumatic chamber 36 coaxially disposed around the axle 24. An inlet 19 fluidly couples a source of pressurized air 17 to an outlet 37 coupled to the closed air space. While Robbins does not specify that the source of pressurized air 17 maintains the closed air space between 1 and 30 psi, it would have been obvious to one of ordinary skill in the art at the time of invention to maintain the closed air space at an air pressure relative to the atmosphere sufficient to prevent undue temperature rises

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within the closed air space that could damage the seals and/or bearings, thus preventing catastrophic failure of the seals and/or bearings, and also to prevent contaminant and/or water from entering the closed air space. The pneumatic chamber is coupled to a DC air compressor 17 located on a trailer 11.

While not disclosed, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the air compressor of Robbins on vehicle towing the trailer 11, for the purpose of reducing the weight of the trailer, and/or allowing the compressor to be used for other purposes (such as tire inflation, etc.) thus reducing the need for multiple compressors for different purposes.

Robbins does not show the pneumatic chamber being disposed within the axle. Jensen teaches the use of a pressurized wheel hub assembly that includes a pressurized chamber within an axle 11. Therefore from this teaching, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the assembly of Robbins with a hollow axle having a pneumatic chamber therein, for the purpose of reducing the number of parts of the assembly and to protect air inlets and outlets from damage by enclosing them within the axle.

4. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Jensen as applied to claims 1 and 9-10 above, and further in view of Hunt et al. Robbins as modified by Jensen discusses a control unit for the air compressor 17 (see column 4, lines 12-17), which would imply a means for measuring

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the air pressure in the system, but does not specifically state the presence of such a means.

Hunt et al teaches the use of a pressure gauge 40 includes a dial face 106 and pressure-indicating needle 104 moving relative to the dial face 106 in direct relation to the air pressure within the closed system. The dial face may be color coded to indicate safe operation of the hub. The pressure gauge would be fluidly coupled to a closed air space.

Therefore from this teaching, it would have been obvious to provide the system of Robbins as modified by Jensen with a pressure gage as taught by Hunt et al, for the purpose of providing a simple and easy way of visually determining the air pressure within the closed space.

5. Claims 7 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robbins in view of Jensen and in further view of Hunt et al as applied to claims 2-5 above, and further in view of Pendleton. Robbins as modified by Jensen and Hunt et al does not show the air pressure gauge being fluidly coupled to the closed air space, nor the use of a polished sleeve with the seals.

Pendleton teaches the use of a pressurized wheel hub 10 including bearings (15-16) that are rotatably securable to an axle 13, and seals 21 (and hub cap 18, which acts as a seal) mounted between the hub 10 and axle 13. The seals (21 & 18) form a closed air space around the bearings (15-16) to form an annular pneumatic chamber coaxially disposed on the axle 13. Also included is a means for measuring the amount of

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pressurized air within the closed air space (namely air valve 20). It is well known in the art that air pressure gauges may be attached to an air valve (such as the air valve 20 shown in Pendleton) in order to measure the air pressure within a closed air space to which the valve is connected in order to determine whether or not the proper pressure is maintained or present within the closed air space.

Therefore from these teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the hubcap 16 of Robbins (as modified by Jensen and Hunt et al) for the purpose of allowing an operator access to the closed air space (by attaching the air pressure gauge as taught by Hunt et al) in order to be able to easily read the pressure of the air within the closed air space (in order to determine proper functioning of the seals, etc.), dependent upon cost and availability.

Pendleton further teaches the use of a sleeve 23 operatively associated with a seal 21, which is securable to the axle 13 (through other elements of the seal 21). This sleeve 23 is not disclosed as being a polished sleeve having a machined surface to permit enhanced sealing. The Examiner takes Official Notice that it is well known in the art that metal sleeves to be used in conjunction with a seal member require a sufficiently smooth, or machined surface, that is free of burrs or other imperfections in order to properly form an airtight seal with the seal member. It is well known that burrs or other imperfections present on the surface of the sleeve would not only prevent the seal member from seating properly against the surface of the sleeve (thus allowing the seal assembly to leak), but could also cause undue damage to the seal member during

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installation (thus possibly causing premature failure during use and/or allow fluid to seep past the seal). It is further well known in the art that a polished (or machined) surface on an element increases the usable surface area of that element. In the instant case, a sleeve having a polished or machined surface would have a greater surface area (by reducing the amount of surface imperfections and/or variance) to mate with an elastomeric seal, thus allowing the formation of an airtight and fluid-tight connection between the seal and sleeve.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the sleeve 23 of Pendleton with a polished machined surface in order to prevent undue damage to the seal member (31 & 35), thus preventing premature failure of the seal during use.

Therefore from these teachings, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the assembly of Robbins as modified by Jensen and Hunt et al with a seal having a polished sleeve as a substitution of equivalent seals, for the purpose of preventing loss of fluid and/or air pressure from the hub assembly, dependent upon cost and availability.

Response to Arguments

6. Applicant's arguments with respect to claims 1-5, 7, and 9-12 have been considered but are moot in view of the new ground(s) of rejection.

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7. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

8. Applicant's arguments filed 17 February 2006 have been fully considered but they are not persuasive. The Applicant argues that the Examiner used Official Notice without providing any reasoning regarding the polished sleeve limitation and the Pendleton reference. It should first be noted that the Examiner previously did not invoke Official Notice regarding the above limitations. The motivation for providing the Pendleton reference with a polished surface was clearly set forth in the previous action. However, the Examiner has now officially invoked Official Notice, and additional motivation has been set forth (see paragraph 5 above).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references are considered to show wheel assemblies

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including pressurized wheel hubs mounted on hollow axles. For example, Johnson shows an assembly of the type described above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason R. Bellinger whose telephone number is 571-272-6680. The examiner can normally be reached on Mon - Thurs (9:00-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Morano can be reached on 571-272-6684. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jason R Bellinger
Primary Examiner
Art Unit 3617



8/1/06